NPIC/TSG/RED/SDB-036-70
10 September 1970

MEMORANDUM FOR: Special Assistant for Plans & Applications, RED

SUBJECT : Collimation Experiment for Light Tables

REFERENCE : RED Memo 147-70

1. In order to investigate the collimating characteristics of various light channeling materials, the following samples were gathered: (1) a small piece of the new [redacted] rear projection screening material, (2) [redacted] "Flexible Lenscreen" [redacted] "Light Control" material, (3) [redacted] "Cylindrical Lenses" which are an intermediate step in the production of the new rear projection screening material, and (4) samples of [redacted] material. This material was used instead of the [redacted] "Precision Lens Array" because of the asking price for this material. (Note: see attachment). The report from ESD should show a correction substituting the [redacted] Material for the [redacted] material.

2. With the materials tested, it appears that those that have a high degree of collimation also have a high absorption and that those that have low light absorption have low collimation. While there is some contention that the light loss could be overcome by removing the diffusing material in the light table, it is the undersigned opinion that a diffusion layer is necessary to even the illumination from the fluorescent tubes.

3. It is recommended that the search be continued for materials which exhibit both increased collimation and transmittance. One possible candidate would be a "Light Control" material with an aluminized coating in place of the dyes presently employed. If and when improved materials are found, additional tests should be made and the results compared.

[redacted]
Project Monitor
NPIC/TSG/RED/SDB

Attachments:
1. ESD Report
2. Photosystems Letter

Distribution:
Original - Addressee
1 - Project Monitor
1 - Chrono

Declass Review by NIMA/DOD

GROUP 1
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